What is a LTIP?

A Plan that provides long term management direction for long duration wildfires based on an analysis of all factors affecting fire suppression capability and effectiveness, fiscal management, firefighter and public safety, values to be protected, and management objectives for the fire area.

Characteristics of Long Duration Fires

	Direct Perimeter Response	Point or Area Protection
Duration	Short - Moderate	Long
Firefighting Success	Moderate - Good	Low - Fair
Management Action focus	Tactical operations	Strategic planning
Management Strategy	Minimize Loss – Minimize Area Burned	Critical Site Protection
Tactics	Direct Attack	Variable

Purpose of LTIP's

LTIP's are intended to:

- Validate and implement the WFSA,
- To meet land and resource management plan objectives and Agency Administrator direction,
- Provide long term management direction for long duration wildfires,
- Provide direction to any management organization.

When is a LTIP Completed?

- After a WFSA has been prepared to develop a new strategic alternative,
- When a fire is designated as a long duration fire,
  - When a fire exceeds initial attack,
  - When initial attack cannot accomplish control goals,
  - When resource availability does not match fire complexity,
  - When values to be protected are able to be protected through are point or area protection rather than strictly direct perimeter control,

Long-Term Needs Assessment Chart

- LTIP Needs Assessment Chart qualitatively assesses appropriate level of planning
  - WFSA – Short Term Implementation Plan
  - WFSA - Long Term Implementation Plan

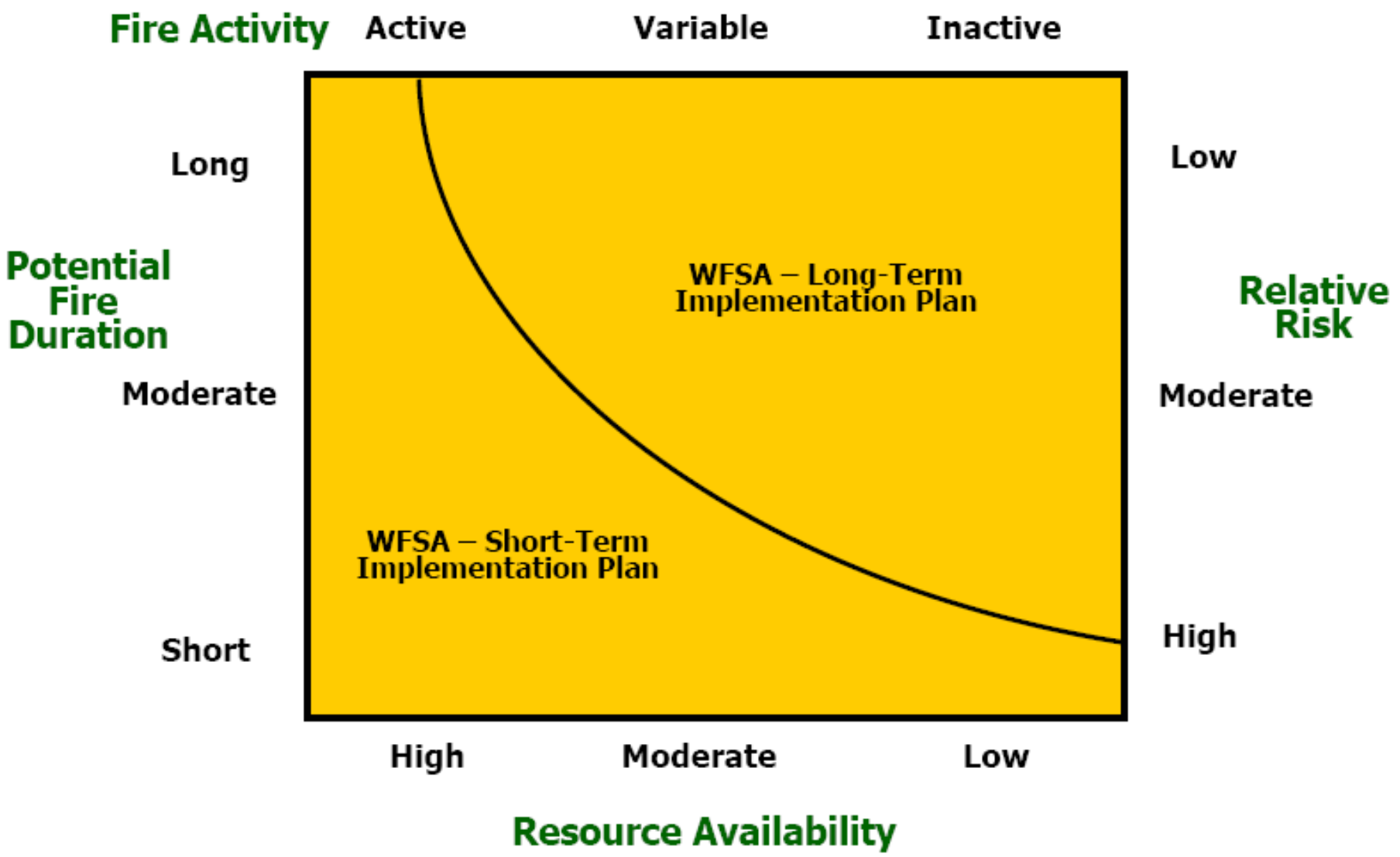
Who determines if a Long Term Plan is needed?

- Agency Administrators, in conjunction with potentially affected neighbors
- Incident Commanders, to facilitate attainment of objectives, with approval of agency administrator

Long-Term Needs Assessment Chart

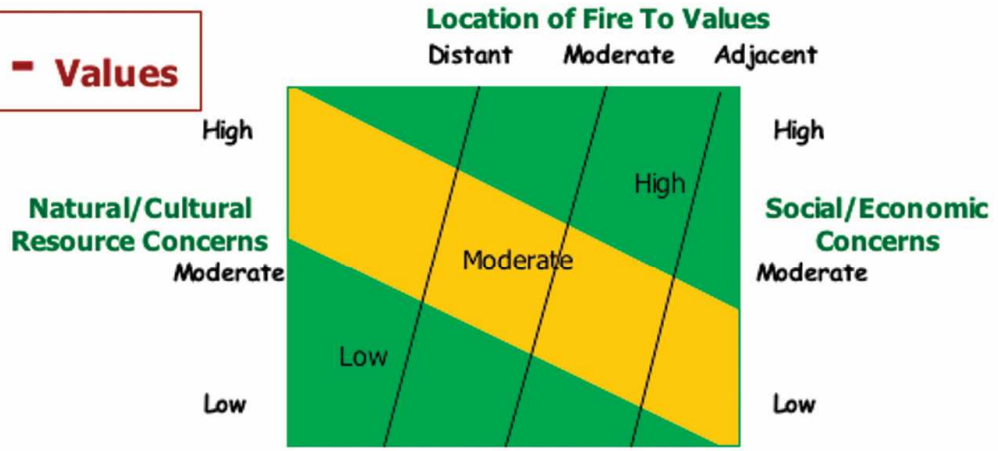
- LTIP Needs Assessment Chart evaluates:
  1. Potential fire duration
  2. Resource Availability
  3. Fire Activity
  4. Relative Risk

Long-Term Implementation Plan Needs Assessment Chart

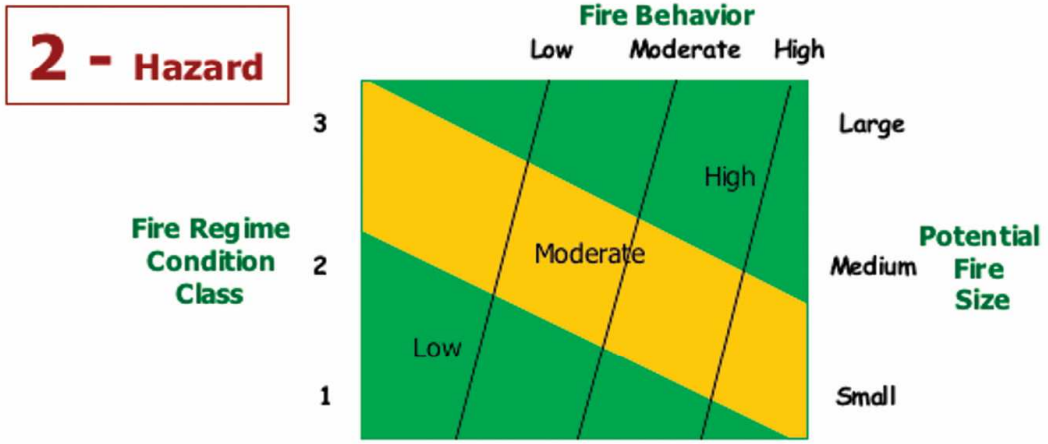


Wildland Fire Relative Risk Assessment

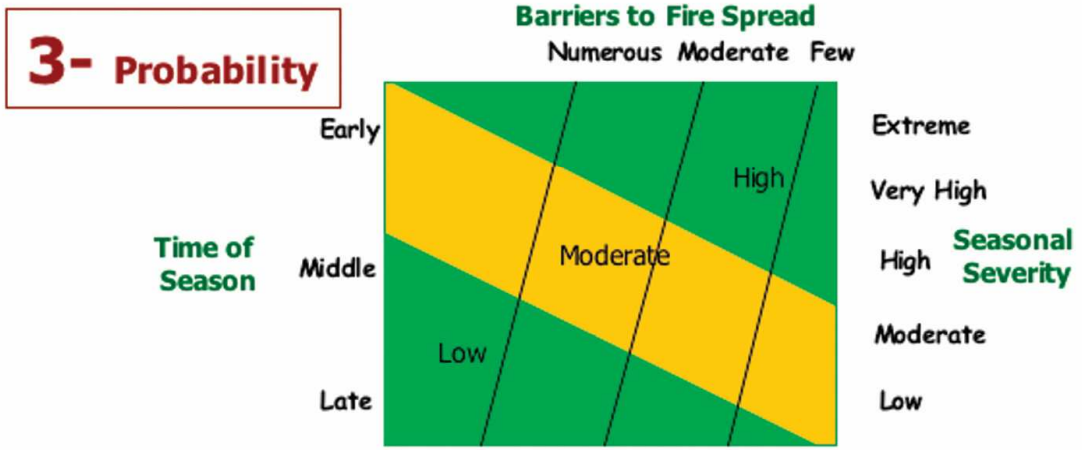
1 - Values



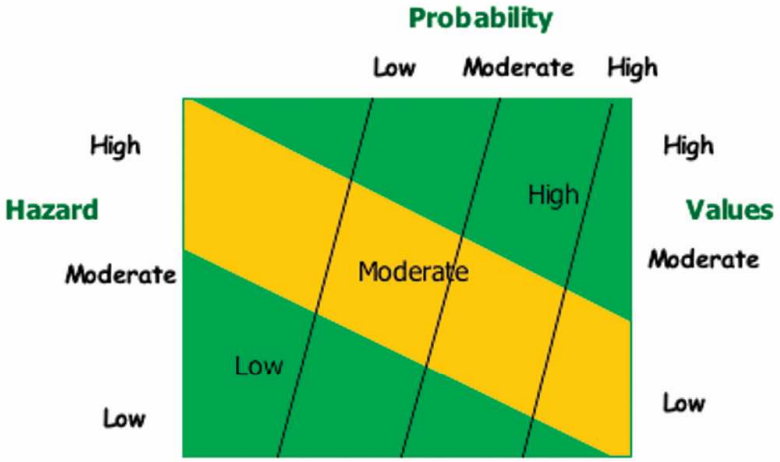
2 - Hazard



3- Probability



4 - Relative Risk



Complete Steps 1 -3: Connect the left and right variables with a line. At the top of the chart, select the appropriate value; follow the line beneath this value down to its intersection with the line connecting the left and right variables. Take results as inputs to Step 4.

Complete Step 4: Read the relative risk from the background area where the intersection occurs.

Indicators that suggest LTIP is Needed

- Completion of LTIP Needs Assessment Chart suggests LTIP needed.
- Probability of success "Low to Moderate"
- Selected WFSA alternative is repeatedly being updated
- Fire complexity exceeds operational capability

Indicators that suggest LTIP is Needed

- IA tactics/strategies unsuccessful.
- Aviation support is not effective
- Personnel cannot safely or effectively engage
- Season severity is high/extreme; resource availability is low

Who develops the Long Term Plan?

- **Local unit**
- **If a team is needed, it may be composed of:**
  - long term fire behavior analyst
  - Operations Chief
  - local resource specialist
  - GIS support
  - IMT members

Bridge

LTIP Relationships with Other Processes

- Direct relationship with WFSA
- No specific relationship with WFIP – different strategic objectives,
- IAP extends LTIP strategic objectives into short-term operational actions.

Comparison of current wildland fire processes

	Primary Role
WFSA	Comparison of multiple alternatives, documentation of preferred alternative
WFIP	Documentation of fire use decision, long-term risk assessment, decision support, long-term operational plan
IAP	Short-term tactical plan
LTIP	Documentation of course of action consistent with WFSA, long-term risk assessment, decision support, long-term operational plan

Comparison of current wildland fire processes

	Strategic Objectives	Management Action Focus
WFSA	Protection	Strategic
WFIP	Resource Benefits	Strategic and Tactical
IAP	Resource Benefits and Protection	Tactical
LTIP	Protection	Strategic and Tactical

Comparison of current wildland fire processes

	Temporal Scale	Spatial Scale
WFSA	Short to long	Incident or complex
WFIP	Short to long	Incident or Complex
IAP	Short	Incident or complex
LTIP	Long	Incident or Complex

Comparison of current wildland fire processes

	Validation	Revision/Update
WFSA	Daily	When objectives are not being achieved
WFIP	Daily or as defined	Continually in response to conditions
IAP	During operational period, new plan competed daily or twice daily	New plan competed daily or twice daily
LTIP	Defined Frequency	Continually in response to conditions

Comparison of current wildland fire processes

	Tactical Responses
WFSA	Not primary focus – other processes carry WFSA direction into tactic responses
WFIP	Full range of tactical responses available, must be justifiable
IAP	Full range of tactical responses available, must be justifiable
LTIP	Full range of tactical responses available, must be justifiable.. However, differ from responses for resource benefit objectives, potentially higher values to be protected and potentially greater urgency and precision in implementation.

LTIP Contents

- Fire Description
- Objectives
- Validation of WFSA alternative
- Definition of all involved agencies/organizations
- Description of all values that may require protection
- Description of mitigation actions

LTIP Contents

- Description of management action points
- List of resources needed
- Delineation of structure protection responsibility
- Signatures and Dates
- Monitoring Activities
- Appendix
  - Long-Term Risk Assessment and Decision Support

Decision Support Tools

- FSPro – Fire Spread Probability Model,
- RAVAR – Rapid Assessment of Values at Risk,
- SCI – Stratified Cost Index,
- FARSITE – Fire Area Simulator,
- FlamMap – spatial fire behavior and mapping program,
- BehavePlus – fire behavior modeling program,
- FireFamilyPlus – fire climatology and occurrence analysis program,
- RERAP – Rare Event Risk Assessment Process,
- NFDRS – National Fire Danger Rating System.
- Fuel Moisture Monitoring

Objectives

Objectives

- *Objectives are short, concise statements that provide direction for the management of a long-term wildland fire.*
- *They must include a metric for success*
- *Objectives may change over the life of a long-term wildland fire, and when they do, the plan may need to be changed*
- *should be the same as those in the WFSA*

Threat Summary

Threat Summary

- *Fires expected duration (season ending Event), extent (acres), expected fire behavior and management implications*
- *Management implications can describe potential impacts to communities, improvements or other resource objectives based on the anticipated fire behavior*

Inventory of Values

Inventory of Values

- *Anything that may be adversely impacted by the fire or management actions taken to mitigate fire effects*
- *Identify Heritage resources*
- *Agency owned structures and improvements (lookouts, guard stations, campgrounds, RAWS, repeater sites, etc.)*
- *Private owned structures and improvements*
- *Permitted uses and structures (outfitters, special use cabins, range allotment improvements, etc.)*
- *Utility infrastructure, dams, powerlines, electronic sites, etc*
- *Threatened or endangered species habitat and sensitive plant habitat.*
- *Any other value at risk known by the hosting agency*

Validation of the WFSA Boundary

Validating the selected WFSA alternative boundary

- Defensibility
- LRMP objectives
- Location of the boundary
- Expected fire duration and extent
- Social and political concerns.
- Assessment information should be found in the FMP, LRMP and local agreements.

Identify the Responsible Fire Protection Agencies

- Identify the Responsible fire protection agencies during the life of this event
- Involve in further planning those entities with responsibility or a vested interest in the management of this fire

Develop Mitigation Actions

- *Determine the appropriate mitigation method*
  - *reduce the hazard (fuels reduction)*
  - *reduce the probability of the hazardous event occurring*
  - *reduce the value of potential losses*
- *Mitigation actions can include on-the-ground actions as well as administrative actions*
  - *check, direct or delaying actions to affect fire spread*
  - *road/area closures, public notification of impending smoke impact*
  - *evacuations*
  - *Private structure protection by a cooperator by agreement?*

Establish Management Action Points

- *Management Action Points are not necessarily "points" but most often lines*
- *The associated management action is triggered by the fire touching any point on the line*

Management Action Point (MAP)

- Most management actions should be conditional i.e. predicted fire behavior, weather, incident objectives change, time of season
- Think of a MAP as an evaluation point
- Include probability of success
- A single value to be protected may have one or more MAPs.
- A MAP can be a point or a line.
- Spatial or conditional

Identify Resource Needs

- Consider logistics of people and supplies
- Determine how much time is available and needed to implement
- Determine the number of resources needed to meet the time available
- Consider the recent success of similar actions

Signature and Dates

- *Signatures of the responsible jurisdictions that may be affected with implementation of this plan. At a minimum all jurisdictions need to be involved in planning, implementation, and updating these plans*
- *Plans will be monitored and updated. When changed conditions or unforeseen events occur. Relative Risk Assessments will be updated when appropriate*

Appendix

- Current drought monitoring maps
- Most current extended weather forecasts
- Current, selected NFDRS indices
- Historic analysis of fire spread events
- Season ending/slowing event waiting time
- Decision support tools. *RAVAR, FSPRO, RERAP, FARSITE, FLAMMAP etc are in this category.*

Decision Support – Added Value

- How fire may burn (intensity, spread rates),
- Fuel conditions, departures from average,
- Fire dynamics,
- Fire danger and weather analysis,
- Fire history reviews, area burned, type of past fires,
- Probability of a fire reaching a planning area boundary
- Probability of season-ending event,

Decision Support – Added Value

- Indications of where the fire may spread, or total area that may be burned,
- How fast the fire will travel,
- How soon the fire may reach critical locations,
- Potential fire effects,
- Fire duration,
- Probability of fire impacting sensitive areas,
- Projections of values to be protected in the fire area and identification of values,
- Probability of where the fire will spread.